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70,000 HIGH SCHOOL SENIORS, THEIR EDUCATIONAL AND VOCATIONAL PLANS, A REPORT OF THE SURVEY OF THE EDUCATIONAL AND VOCATIONAL INTERESTS AND PLANS OF INDIANA'S 70,000 HIGH SCHOOL GRADUATES IN 1966.

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THE INTERESTS OF GRADUATING SENIORS WERE IDENTIFIED TO PROVIDE NECESSARY DATA FOR DEVELOPING THOSE AREAS OF POST-HIGH SCHOOL EDUCATION NEEDED FOR PERSONS ENTERING THE LABOR MARKET. ABOUT 38,000, OR 54 PERCENT, OF 70,000 GRADUATES COMPLETED A 22-ITEM QUESTIONNAIRE AND MADE CURRICULUM AND OCCUPATIONAL CHOICES RELATED TO THEIR EDUCATIONAL AND VOCATIONAL PLANS. KNOWN CHARACTERISTICS AND KNOWN GEOGRAPHICAL DISTRIBUTION OF THE TOTAL POPULATION OF HIGH SCHOOL SENIORS COMPARED FAVORABLY WITH THE SURVEY RESPONSES, JUSTIFYING THE GENERAL APPLICATION OF SURVEY CONCLUSIONS TO THE TOTAL SENIOR POPULATION. SOME GENERAL FINDINGS WERE--(1) 42.8 PERCENT OF THE GRADUATES PLANNED TO ENTER A COLLEGE OR UNIVERSITY, (2) 12 PERCENT PLANNED TO ENROLL IN VOCATIONAL OR TECHNICAL SCHOOLS AFTER GRADUATION, (3) ONLY 12,500 OF THE 40,000 WHO ENTERED THE LABOR FORCE HAD HIGH SCHOOL SUBJECTS WHICH WERE VOCATIONALLY ORIENTED, (4) STUDENT INTEREST IN VOCATIONAL SUBJECTS INCREASED DURING THE SENIOR YEAR WITH PREFERENCES MORE IN THE BUSINESS AND SERVICE THAN IN THE TRADE AND INDUSTRIAL AREA, AND (5) THE MOST FREQUENT CAREER SELECTIONS FROM A LIST OF 196 OCCUPATIONS WERE TEACHERS (ALL FIELDS), ENGINEERS (ALL FIELDS), ACCOUNTANTS, SECRETARIES, MANAGERS (TRADE AND SERVICE), DRAFTSMEN-DESIGNERS, PROFESSIONAL NURSES, BARBERS-BEAUTICIANS, FARMERS, AND BUSINESS MACHINE OPERATORS. EDUCATIONAL IMPLICATIONS CONCERNED NEEDS FOR BETTER GUIDANCE AND COUNSELING, VOCATIONAL TRAINING AND RETRAINING FOR 100,000 PERSONS ANNUALLY, AND ANNUAL SURVEYS OF THIS KIND. SPECIFIC DATA ARE PRESENTED IN GRAPHS, TABLES, AND A MAP. (BS)

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70,000 HIGH SCHOOL SENIORS

THEIR EDUCATIONAL AND VOCATIONAL PLANS

A report of the survey of the
educational and vocational interests and plans
of Indiana's 70,000 high school graduates in 1966.

INDIANA VOCATIONAL TECHNICAL COLLEGE

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TABLE OF CONTENTS

	Page
PREFACE	iii
DESCRIPTION OF THE SURVEY	1
GENERAL FINDINGS OF THE SURVEY	6
To College or to Work	6
The Seniors' Major Subjects	7
Hindsight on Vocational Training	8
Ten Most Common Career Choices	9
RELATIONSHIPS AND ANALYSES	10
Relationships	10
Educational Plans Beyond High School	10
Fathers' Education and Occupation	10
Financing Their Education	11
Post-High School Plans	11
Their Grades and Their Plans	12
Main Vocational Interest vs Educational Plans	13
Educational Plans vs Where They Live	14
Place of Residence vs Main Vocational Interest	15
Where They Want to Work	16
How Did They Choose a Career?	16
Major Subjects vs Main Vocational Interest	17
Certainty of Career Plans	17
When Career Decisions Were Made	18
IMPLICATIONS FOR GUIDANCE AND COUNSELING	18
THE NEED OF VOCATIONAL TRAINING FACILITIES	19
CONCLUSIONS	20
APPENDIX	21
Organized Occupational Curriculums	21
Major Occupational Groups and Divisions	22

PREFACE

In a recent act by the Congress of the United States relating to manpower needs, the Congress states . . .

> **"There is critical need for more and better trained personnel in many vital occupational categories, including professional, scientific, technical, and apprenticeable categories; that even in periods of high unemployment, many employment opportunities remain unfilled because of the shortages of qualified personnel; and that it is in the national interest that current and prospective manpower shortages be identified and that persons who can be qualified for these positions through education and training be sought out and trained, in order that the nation may meet the staffing requirements of the struggle for freedom. . . ."**

Being cognizant of this critical need and its implications for the State of Indiana, the General Assembly in its acts of 1963 (Chapter 371) created and established: "A new state educational institution to be devoted primarily to non-collegiate non-credit practical or vocational technical and semi-technical training for the citizens of Indiana." The name given to the new institution was "Indiana Vocational Technical College."

Certain specific objectives have been formulated and adopted by the Board of Trustees of the Indiana Vocational Technical College. They are as follows:

1. **To see that the needs of residents of the state for post high-school vocational and technical training and retraining are met by providing educational opportunities.**
2. **To see that the needs of employers of the state for persons with vocational and technical skills and knowledge are provided for in addition to those needs provided for through secondary schools, private agencies or collegiate programs.**
3. **To establish geographic regions within the state, and to establish regional boards whose responsibilities will be set forth in charters to be granted in accordance with the legislation creating the Indiana Vocational Technical College.**
4. **To identify needs of the state residents and employers by Indiana Vocational Technical College regions for specific vocational and technical programs.**
5. **To ascertain all vocational and technical education programs in existence, or planned in the immediate future that are offered in each region.**
6. **To attract, maintain and recruit when appropriate, a sufficient number of persons eligible for Indiana Vocational Technical College programs to meet employer requirements for needed vocational and technical skills.**
7. **To enroll only those students found to have interests in and need for specific occupational training or retraining.**
8. **To make certain that effective education and training benefits are achieved from the use of funds used for Indiana Vocational Technical College programs and services.**

In setting about the task of achieving these objectives, a multi-phased approach has been undertaken. The occupational and manpower needs of the state are to be ascertained. The background and desires of prospective students and trainees must be studied. Geographical and population distribution factors must be considered. Existing and planned facilities and programs must be integrated into a state-wide system of educational resources utilization. Federal, state, and local funds must be programmed and a system of program priorities established according to educational needs and funds available.

With the identification of these factors and their projection into a master plan, a picture of the role of the Indiana Vocational Technical College can emerge.

This survey is one of the first attempts to identify the specific needs of Indiana residents. The Indiana Vocational Technical College is indebted to the efforts of the management consulting firm of Booz, Allen and Hamilton, Inc. under whose direction the survey was formulated and administered, the Indiana State Department of Public Instruction, and all the school administrators and teachers throughout the state who supported and assisted in the survey. Identification of the interests of graduating seniors in the state's secondary schools will provide necessary data for developing those areas of post high school education which will be sought by young people entering the labor market in the coming years.

DESCRIPTION OF THE SURVEY

What do high school seniors say they plan to do regarding their education beyond the high school? What are their chief vocational interests? Will they go to college, full-time or part-time? Will they go to a technical school? Where and in what occupations do they wish to work? What about military service? How did they choose their profession, trade, or other type of employment? When did they make their decisions? Who influenced them to choose their planned vocation? How many plan additional vocational training?

These and many other questions are answered by the seniors responding to the questionnaire. In their answers lie many significant implications for vocational technical education in Indiana. Granted that a high school student's plans, as anyone's, often go awry and that his judgment may lack a degree of maturity, the secondary school student who is a senior and anticipating graduation has reached a point where his aspirations, plans, and opinions are of vital interest to society. They are of special interest to Indiana Vocational Technical College, to institutions of higher learning, and to school administrators, teachers, counselors and others intimately concerned with educational planning and administration.

In May of 1966 a questionnaire was distributed to all public, parochial and private high schools in the State of Indiana. About 70,000 questionnaires were distributed and about 38,000—or 54 per cent, were completed and returned for analysis. This exceptionally high return is attributed to the cooperative efforts of the Department of Public Instruction and school administrators throughout the state. Validating questions and many specific correlations were built into the questionnaire.

Twenty-two questions were asked in the questionnaire. Students were asked to select their occupational curriculum and occupation choices from the lists found in the appendix. The questions were:

1. **Name and location of high school**
2. **Sex and age of respondent**
3. **My high school majors (three years or more in a field of study) are. . . .**
4. **If vocational and technical training, or more of it, had been offered in my high school, I would have enrolled in. . . .**
5. **My high school grade average is. . . .**
6. **The population of the community in which I live is. . . .**
7. **My father's occupation is or was, if deceased. . . .**
8. **The highest level of education of my father or, if deceased, the head of my household is. . . .**
9. **After graduation from high school my plans are for. . . .**
10. **If vocational and technical training programs for high school graduates were now available now in my community, I would enroll in. . . .**
11. **My present career plans for a vocation or profession are Definite Almost definite Indefinite**
12. **At present my *main* vocational or professional interest after I complete my education or military service is. . . .**
13. **I had my first interest in my chosen vocational or professional field in grade. . . .**
14. **I decided on my chosen vocational or professional field in grade. . . .**
15. **The person who has most influenced my career choice is. . . .**
16. **I have had job experience closely related to my vocational or professional career choice . . . .**
17. **My educational plans after high school are to enroll in. . . .**
18. **My preference of a vocational or professional school was or will be a. . . .**
19. **My selection of a school for vocational or professional training has been, or will be, based *primarily* upon. . . .**
20. **The school in which I plan to enroll is located within. . . .**
21. **I plan to finance my education through. . . .**
22. **I hope to be employed in my chosen profession or vocation in. . . .**

Known characteristics of the total population of high school seniors in the state were compared to the total survey responses. Information regarding the known characteristics of the seniors was obtained from the State Department of Public Instruction. There is a favorable comparison of the total population of high school seniors to survey respondents in regard to sex, school size, community size, age, ratio of private and parochial secondary schools to public secondary schools, plans

for college, and high school curricula. Conclusions based on an analysis of this survey can be applied in general to the total state population of high school seniors due to the volume and nature of the response.

There is also a favorable comparison of the known geographical distribution of the population of high school seniors with the responses of the seniors by geographical areas of the state. This factor is of concern to the Indiana Vocational Technical College because of its objective of organizing geographic regions of the state and establishing regional institutes for vocational technical training.

Although this report deals only with the findings on a state-wide basis, detailed analyses of the questionnaire returns by regions are being made.

Exhibit 1, which follows, compares the characteristics of total population of high school seniors to characteristics of survey respondents. (note: The difference in age distribution is accounted for by the fact that the total population age distribution was reported early in the year as opposed to the survey data reported in June. Numerous seventeen-year-olds had undoubtedly reached their eighteenth birthday between the time they entered their senior year and the data of the survey.)

Exhibit 2 (page 4) shows the regional distribution of total high school senior responses and responses of seniors and high schools by regions.

(Note: Since the survey was made, which shows 14 regions, IVTC has limited the number of regions to 13.)

Exhibit 3 (page 5) shows the geographic distribution of secondary schools in Indiana responding to the survey of vocational plans of senior students.

EXHIBIT 1

COMPARISON OF CHARACTERISTICS OF TOTAL POPULATION OF HIGH SCHOOL SENIORS TO CHARACTERISTICS OF SURVEY RESPONDENTS, 1966

Characteristic	Total	Respondents
Sex Distribution		
Male	50.8%	50.5%
Female	49.2%	49.5%
School Size		
0— 99	52.8%	46.4%
100—199	21.7%	23.5%
200—299	8.9%	10.5%
300—399	6.0%	5.4%
400 or more	10.6%	14.2%
Community Size		
(50,000 or more)	41.7%	41.4%
Age Distribution		
16	3.8%	.3%
17	50.3%	39.8%
18	27.1%	45.6%
19	5.2%	5.2%
20	.2%	.5%
other	13.4%	8.5%
Ratio of Parochial and Private Secondary Schools to Public Secondary Schools	9.0%	8.7%
Plans for College	40.0%	44.7%

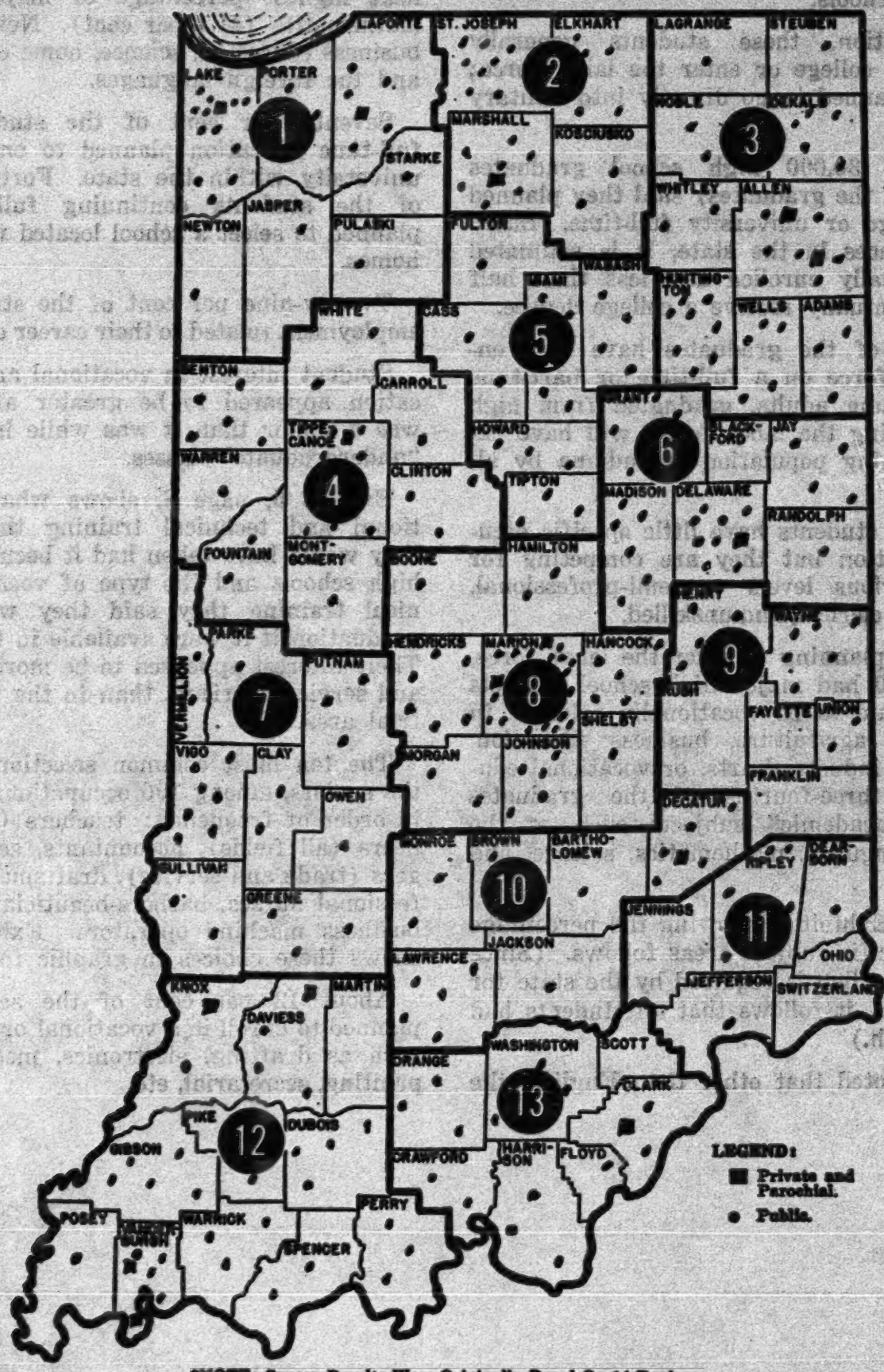
EXHIBIT 2

REGION DISTRIBUTION OF TOTAL HIGH SCHOOL SENIOR RESPONSES AND RESPONSES OF SENIORS AND HIGH SCHOOLS BY REGION

Region	% of High School Seniors in the State	% of Total Responses	% Responding in Region	
			% Seniors	% Schools
I	15.0	9.2	39	37
II	9.1	8.4	60	53
III	9.4	9.1	70	61
IV	4.7	5.8	52	51
V	4.7	6.1	80	61
VI	8.1	9.0	69	53
VII	4.1	5.0	78	52
VIII	20.5	24.5	85	64
IX	4.4	3.7	60	40
X	2.8	1.3	25	50
XI	2.8	2.6	70	53
XII	2.1	1.1	28	39
XIII	8.8	10.3	88	60
XIV	4.0	4.2	64	53

EXHIBIT 3

GEOGRAPHIC DISTRIBUTION OF SECONDARY SCHOOLS IN INDIANA RESPONDING TO THE SURVEY OF VOCATIONAL PLANS OF SENIOR STUDENTS*



*NOTE: Survey Results Were Originally Based On 14 Regions.

GENERAL FINDINGS OF THE SURVEY

In June of 1966 about 70,000 high school students were graduated from Indiana public, private, and parochial high schools.

After graduation, these students generally planned to enter college or enter the labor force; relatively few planned to go directly into military service.

Approximately 30,000 high school graduates (42.8 per cent of the graduates) said they planned to enter a college or university full-time. Based on past experiences in the state, it is estimated that 25,000 actually enrolled and less than half of them will eventually receive a college degree.

About 40,000 of the graduates have now entered the labor force on a full-time or part-time basis. These young adults, graduated from high school and entering the labor force, will have expanded the working population of Indiana by almost 4 per cent.

Many of these students have little specific occupational preparation but they are competing for positions of various levels — semi-professional, technical, skilled, clerical, and unskilled.

Of the 40,000 planning to enter the labor force, only about 12,500 had major high school subjects that might be said to be vocationally oriented in nature, such as agriculture, business education, home economics, industrial arts, or vocational education. About three-fourths of the graduates "majored" in "academic" subjects such as the social studies, language, mathematics, science, and music.

A bar graph, Exhibit 4, showing the percentage of majors in specific subject areas follows. (Since three years of English is required by the state for a general diploma, it follows that all students had a major in English.)

It should be noted that other than English, the subject most frequently constituting a major (56.6 per cent of the majors) was social studies and the next highest percentage of major subjects was mathematics (41.1 per cent). Next in order were business education, science, home economics, music, and the foreign languages.

Seventy per cent of the students continuing full-time education planned to enter a college or university within the state. Forty-eight per cent of the students continuing full-time education planned to select a school located rather near their homes.

Twenty-nine per cent of the students have had employment related to their career choice.

Student interest in vocational and technical education appeared to be greater after the student was a senior than it was while he was attending "undergraduate" classes.

Exhibit 5, page 8, shows what type of vocational and technical training the students said they would have taken had it been offered in their high schools and the type of vocational and technical training they said they would take after graduation if it were available in their community. Their interest appeared to be more in the business and service curricula than in the trade and industrial area.

The ten most common selections of careers by the seniors, among 196 occupational positions were in order of frequency: teachers (all fields), engineers (all fields), accountants, secretaries, managers (trade and service), draftsmen-designers, professional nurses, barbers-beauticians, farmers, and business machine operators. Exhibit 6, page — shows these choices in graphic form.

About 12 per cent of the seniors said they planned to enroll in a vocational or technical school, such as drafting, electronics, medical technology, printing, secretarial, etc.

EXHIBIT 4

PER CENT OF TOTAL 1966 HIGH SCHOOL SENIOR STUDENTS ENROLLED IN EACH MAJOR FIELD OF STUDY

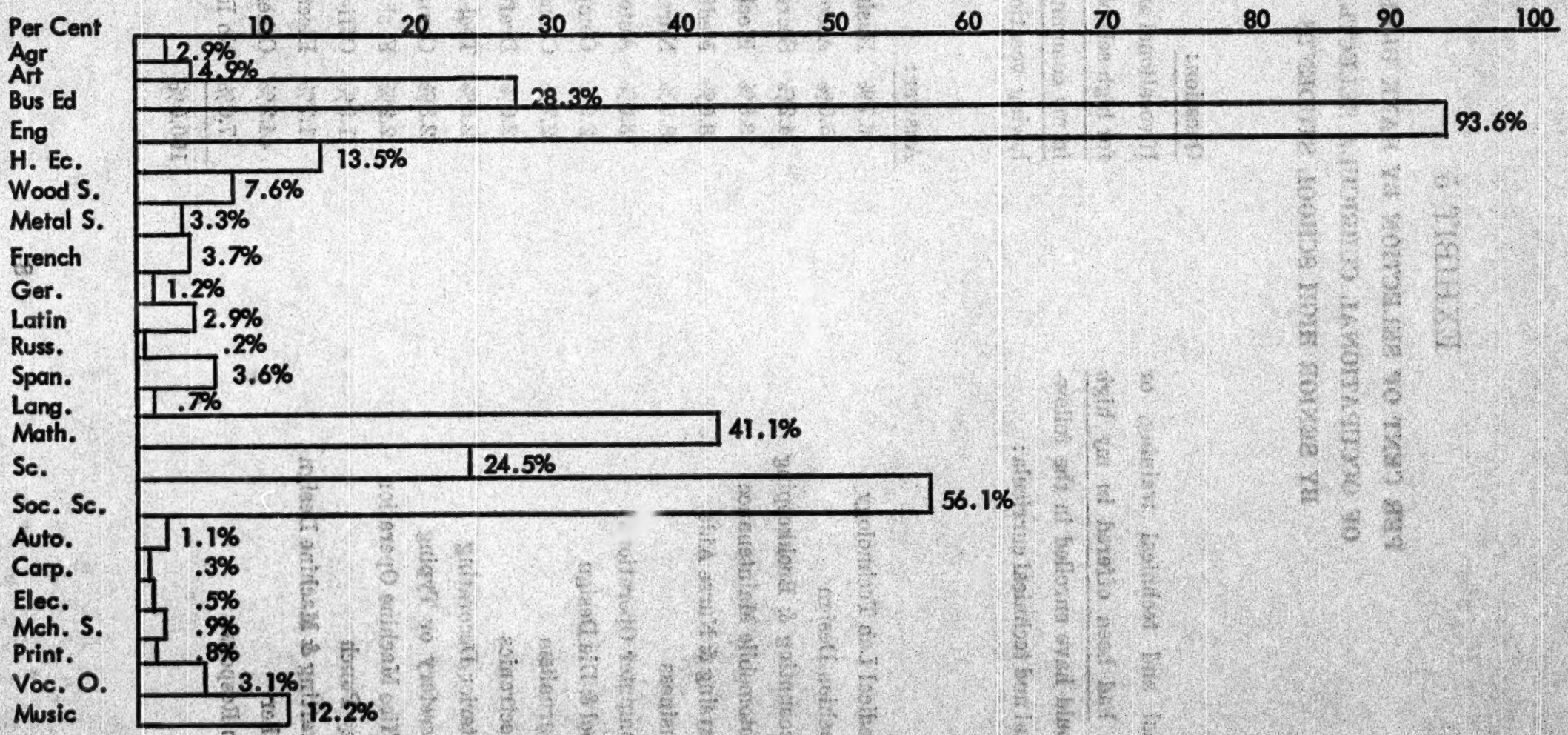


EXHIBIT 5

PER CENT OF SELECTION BY RANK ORDER OF OCCUPATIONAL CURRICULA SELECTED BY SENIOR HIGH SCHOOL STUDENTS

Question:

If vocational and technical training, or more of it, had been offered in my high school, I would have enrolled in the following vocational and technical curricula:

Answer:

2.9%	Medical Lab Technology
2.6%	Fashion Design
2.6%	Accounting & Bookkeeping
2.5%	Automobile Maintenance
2.4%	Nursing & Nurse Aide
2.0%	Business
1.8%	Computer Operations
1.7%	Tool & Die Design
1.5%	Journalism
1.5%	Electronics
1.3%	Interior Decorating
1.3%	Secretary or Typing
1.3%	Office Machine Operation
1.3%	Key Punch
1.2%	Drafting & Machine Design
15.7%	Other
56.4%	No Response
100.0%	

Question:

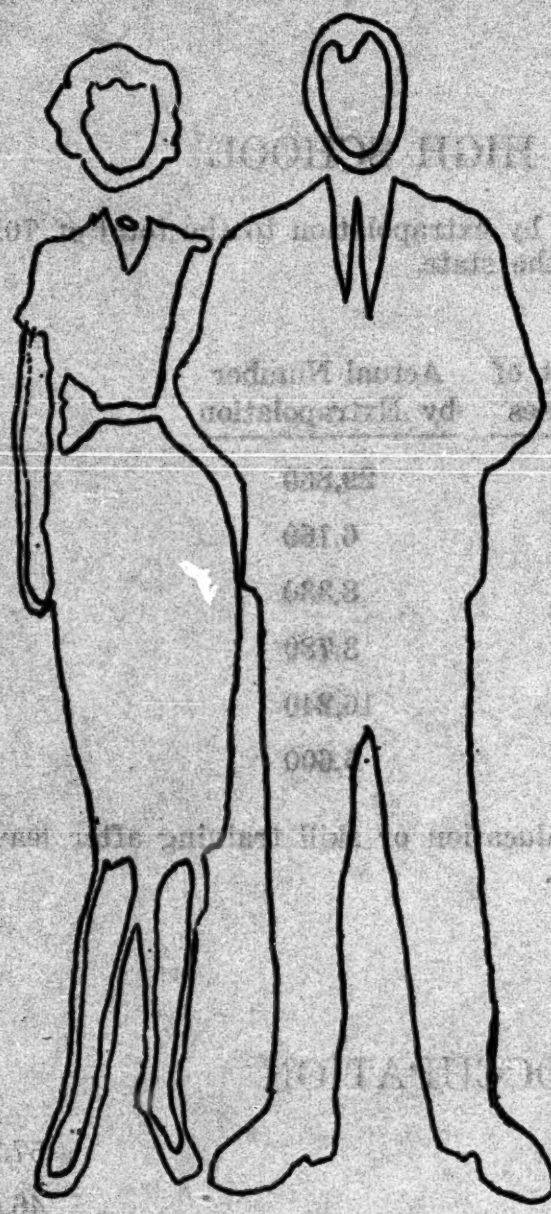
If vocational and technical training programs for high school graduates were now available in my community, I would enroll in the following vocational and technical curricula:

Answer:

6.7%	Business
5.0%	Accounting & Bookkeeping
4.2%	Secretarial or Typing
3.8%	Electronics
3.5%	Medical Lab Technology
3.5%	Nursing & Nurse Aide
3.0%	Automobile Maintenance
2.9%	Computer Operations
2.7%	Cosmetology & Barbering
2.6%	Drafting & Machine Design
2.5%	Tool & Die Design
2.3%	Commercial Art & Advertising
2.2%	Fashion Design
1.9%	Office Machine Operation
1.7%	Electrical Technology
44.2%	Other
7.0%	No Response
100.0%	

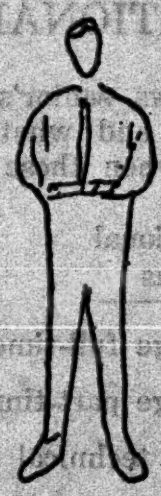
EXHIBIT 6

TEN MOST COMMON CAREER CHOICES BY OCCUPATIONAL POSITION OF INDIANA HIGH SCHOOL SENIORS GRADUATING IN 1966



TEACHERS

ENGINEERS



ACCOUNTANTS

SECRETARIES

MANAGERS-TRADE AND SERVICES

DRAFTSMEN-DESIGNERS

PROFESSIONAL NURSES

BARBERS-BEAUTICIANS

FARMERS

BUSINESS MACHINE OPERATORS

Forty-one per cent of the students who planned to continue their education beyond high school said they hoped to be employed in the city in which they resided as high school students.

RELATIONSHIPS AND ANALYSES

Further significant details concerning the seniors are obtained through a study of the relationships of specific responses to selected items.

Correlation of the answers of the respondents to questions involving their intention to go to college with their answers to six other questions showed consistently that 42.8 per cent of the seniors said they planned to enter college. The range was from 42.7 per cent to 43.1 per cent.

EDUCATIONAL PLANS BEYOND HIGH SCHOOL

The following table shows senior's educational plans beyond high school, and what this would mean in actual numbers when these percentages are applied by extrapolation to the total of 70,000 seniors in the state.

Educational Plans	Per Cent of Responses	Actual Number by Extrapolation
Enter college full-time	42.8	29,860
Enter college part-time	8.8	6,160
Enroll in a technical school	11.9	8,330
Become trade apprentices	5.4	3,780
Indefinite or no plans	23.2	16,240
"Other" plans	8.0	5,600

From these figures it would appear that at least a fourth of the seniors, or 17,500, had no definite plans for education or skill training after leaving high school.

FATHERS' EDUCATION AND OCCUPATION

Of the seniors whose father had a college or university degree, 80.2 per cent planned to enter a college or university. Of the seniors whose father's educational level was marked "unknown", 40.7 per cent had indefinite plans or no plans for continuing their education beyond high school.

Of the seniors whose father's occupation was marked "professional", 63.8 per cent planned to enter a college or university. The percent planning to enter a college or university, full-time, and their father's occupational category follows:

Category	Per Cent
Professional	63.8
Semi-professional	46.2
Managerial	57.2
Clerical	46.6
Sales	58.6
Service	36.0
Agriculture	44.0
Manufacturing	33.1
Miscellaneous	30.6
Craftsmen-foremen	32.9

Of those whose father's occupations were listed as "manufacturing" including skilled, sem-skilled, and unskilled workmen, this group constituted 25.2 per cent of all seniors who planned to enter college.

PLANS FOR FINANCING CONTINUED EDUCATION

The seniors planned to utilize various means of financing their education beyond high school. From the number of responses compared with the number of questionnaires returned, 53,508 versus 38,000, it is obvious that many of the seniors planned to use more than one method of financing their education.

Of the seniors who planned to go to college full-time, the following table shows how they planned to finance their education.

Methods of Financing	Per Cent Using This Method	Actual Number by Extrapolation
Parental aid	35.5	10,650
Personal savings	26.9	8,070
Work part-time	19.7	5,910
Seek a loan	10.4	3,120
Scholarship	4.3	1,290
Work full-time	1.6	480
Unknown and "Other"	1.4	320

Of the seniors planning to go to an extension center or regional campus, 23.6 per cent said they would work part-time, and 10.6 per cent said they would work full-time.

Of those planning to enter a technical school, 25.6 per cent said they would work part-time, and 12.7 per cent said they would work full-time.

POST HIGH SCHOOL PLANS

When asked what their plans were after graduation from high school, the seniors' responses were approximately as follows:

Plans After High School	Per Cent of Seniors	Number by Extrapolation
Immediate employment	15.3	10,630
Continue full-time education	46.0	32,200
Employment and education	22.4	15,680
Military service, no further education	2.7	1,890
Military service, then education	5.4	3,780
Marriage, no further education	1.8	1,260
"Other"	4.4	3,080

THEIR GRADES AND THEIR PLANS

A correlation study of the grade averages of the seniors with their educational plans after high school showed that 11.9 per cent of the seniors who planned to enter college had a grade average of "A". Of the seniors who had an average of "A", 88.4 per cent planned to enter college.

Forty-seven per cent of the seniors who planned to enter college said they had a grade average of "B" and 34 per cent said they had a grade average of "C".

The grade averages of the seniors and their educational plans after high school are shown by the following tables.

Eleven per cent of the seniors (7,700 seniors) said they did not know what their grade average was.

Seniors with an Average Grade of "A"
(4,270 seniors)

Per Cent	Plans
88.4	Enter college full-time
7.1	Enter a college at an extension center
2.6	Enter a technical school
2.6	Indefinite plans
2.1	No plans
1.8	"Other" plans
0.4	Become trade apprentices

Seniors with an Average Grade of "B"
(22,680 seniors)

Per Cent	Plans
62.4	Enter college full-time
10.2	Enter a college at an extension center
8.6	Enter a technical school
6.8	No plans
5.9	Indefinite plans
4.6	"Other" plans
1.8	Become trade apprentices.

Seniors with an Average Grade of "C"
(32,620 seniors)

Per Cent	Plans
31.7	Enter college full-time
14.8	Enter a technical school
13.9	Indefinite plans
13.8	No plans
9.6	"Other" plans
8.9	Enter a college at an extension center
7.4	Become trade apprentices

Seniors with an Average Grade of "D"
(2,730 seniors)

Per Cent	Plans
27.7	Indefinite plans
17.6	No plans
14.6	"Other" plans
12.8	Enter a technical school
11.7	Enter college full-time
11.0	Become trade apprentices
4.6	Enter a college at an extension center

Twenty-seven per cent of the seniors with a "C" average had no plans or indefinite plans for education or training beyond high school, and 45 per cent of the seniors with a "D" average had no plans or indefinite plans for education or training beyond high school.

Of the seniors planning to enter a technical school (8,330 seniors) —

1.3 per cent had an average of "A"
23.6 per cent had an average of "B"
58.4 per cent had an average of "C"
4.2 per cent had an average of "D"
12.6 per cent were marked "unknown"

MAIN VOCATIONAL INTEREST AND EDUCATIONAL PLANS

The seniors' main professional or vocational interests were indicated as follows:

Per Cent of Seniors	Main Vocational Interest	Actual Number By Extrapolation
41.5	professional occupations	30,050
9.9	semi-professional occupations	6,930
4.3	managerial positions	3,010
11.9	clerical positions	8,330
1.7	sales positions	1,190
5.4	service occupations	3,780
2.8	agriculture	1,960
10.8	manufacturing	7,560
2.9	miscellaneous	2,030
.9	craftsmen	630
8.0	foremen	5,600

The educational plans of the seniors who said they wished to become craftsmen (630 seniors) were as follows:

Per Cent	Educational Plans	Number by Extrapolation
24.4	Enter college full-time	153
20.7	No plans	130
18.7	Indefinite plans	121
11.7	Enter a technical school	73
8.7	Enter college at an extension center	55
8.0	Become trade apprentices	50
7.7	"Other" plans	48

The educational plans of the 5,600 seniors who said they planned to become foremen were as follows:

Per Cent	Educational Plans	Number by Extrapolation
23.6	Enter college full-time	1,331
19.2	No plans	1,075
16.4	Indefinite plans	918
11.7	Become trade apprentices	655
11.3	Enter a technical school	632
10.9	"Other" plans	610
6.9	Enter college at an extension center	386

The educational plans of the 1,960 seniors who said their main vocational interest was in agriculture said their educational plans were as follows:

Per Cent	Educational Plans	Number by Extrapolation
33.6	Enter college full-time	659
20.2	No plans	395
16.3	Indefinite plans	319
11.5	"Other" plans	225
6.6	Become trade apprentices	129
6.2	Enter college at an extension center	121
5.6	Enter a technical school	110

Seniors who said their chief interest was in clerical work (8,330 seniors) had the highest percentage of un-planned programs for continuing their education or training. Of this group, 27.6 per cent had no plans for continuing their training, and 21.2 per cent had indefinite plans.

Only 2.8 per cent of those interested in the profession had no plans for continuing their education, and only 4.2 per cent had indefinite plans.

THEIR EDUCATIONAL PLANS VS. WHERE THEY LIVE

More than one third of all the seniors in the state live in cities with a population of 50,000 or more. Their place of residence in respect to the population of their home community is shown in the following table.

Per Cent of Seniors	Population of Community	Number of Seniors by Extrapolation
36.4	over 50,000	25,480
9.3	25,000 to 50,000	6,510
12.2	10,000 to 25,000	8,540
11.3	5,000 to 10,000	7,910
7.1	2,500 to 5,000	4,970
4.4	1,000 to 2,500	3,080
14.6	less than 1,000 or rural area	10,220
4.7	population "unknown"	3,290

The educational plans of the 10,220 seniors who live in rural areas or in villages of less than 1,000 population were shown as follows:

Per Cent of Seniors	Educational Plans	Number of Seniors by Extrapolation
37.2	Enter college full-time	3,802
29.9	Indefinite or no plans	3,055
18.5	Enter a technical school	1,880
8.9	"Other" plans	910
5.8	Become trade apprentices	593
4.7	Enter college at an extension center	480

The educational plans of the 25,480 seniors who live in cities of 50,000 or more population were shown as follows:

Per Cent of Seniors	Educational Plans	Number of Seniors by Extrapolation
48.7	Enter college full-time	12,409
18.0	Indefinite or no plans	4,586
12.3	Enter college at an extension center	3,134
10.0	Enter a technical school	2,548
6.4	"Other" plans	1,631
4.6	Become trade apprentices	1,172

In each population group, the percentage of seniors who said they would enter a technical school remained rather constant, ranging from 10 per cent of the seniors in cities of 50,000 or more to 13.7 per cent in towns or villages with a population of 1,000 to 5,000.

Similarly, the percentages of those who said they would become trade apprentices showed little variation, the range being from 4.6 per cent of the seniors living in cities of 50,000 or more to 6.6 per cent of the seniors living in towns of from 5,000 to 10,000 population.

PLACE OF RESIDENCE VS MAIN VOCATIONAL OR PROFESSIONAL INTEREST

Only 9.2 per cent of the 7,560 seniors living in rural areas said their main vocational interest was in agriculture; 34.4 per cent were chiefly interested in the professions; 9.3 per cent in semi-professional vocations; 7.5 per cent in becoming craftsmen or foremen; 13.2 per cent in manufacturing; and 14.2 per cent in clerical or sales positions.

Of the 30,050 seniors planning to enter the professions, 9.3 per cent live in the rural areas, and 40.8 per cent live in cities with a population of 50,000 or more.

Of the 1,960 seniors who planned to enter agriculture, 13.2 per cent live in cities of 50,000 or more, and 34.7 per cent live in rural areas.

WHERE THEY WANT TO WORK

Of all the seniors responding to this question, 23.1 per cent said they hoped to be employed in the city of their residence; 16.7 per cent in the county of their residence; 3.4 per cent wanted to work over 50 miles from home but in the state; 20.4 per cent wanted to work outside the state; and 32.8 per cent said they had no preference.

Of the seniors who planned to enter college, 23.4 per cent said they hoped to be employed outside the state; 41.1 per cent had no preference; and the remaining percentage of the seniors hoped to be employed in the state.

Of all the seniors who said they wanted to work in the city of their residence while in high school, 36.5 per cent were those planning to enter a college or university; 14.5 per cent were those planning to enter a college extension center; 18.2 per cent planned to enter a technical school; 10.3 per cent planned to become trade apprentices; and 10.2 per cent were those who had indefinite plans or no plans as to continuing their education or training beyond high school.

HOW DID THEY CHOOSE A CAREER?

When asked who had the most influence on their choice of a career, the seniors responded as shown by the following table.

Person with most Influence	Per Cent of Seniors	Actual Number By Extrapolation
Own efforts	39.7	27,790
Father	12.7	8,890
A high school teacher	11.1	7,770
Mother	10.7	7,490
A personal friend	7.1	4,970
Other	4.4	3,080
Another relative	4.0	2,800
Brother or sister	3.6	2,520
Guidance counselor	2.3	1,710
Employer	2.3	1,710

Of the seniors planning to enter the service occupations, 46.6 per cent said they decided their career choice by themselves.

Of the seniors planning to enter the professions, 40.8 per cent said they made their own decisions, and 41.3 per cent of those planning to enter the semi-professional occupations said they made their own decisions.

Of those who said a high school teacher had the most influence on their choice of a career, 56.7 per cent were planning to enter the professions.

Of those who said a high school guidance counselor had the most influence in their making a choice, 37.4 per cent were planning to enter the professions; 12.5 per cent were to enter the semi-professional occupations; 17.7 per cent chose clerical work; 11.7 per cent chose manufacturing; 6.4 per cent planned to become trade apprentices; and 1.0 per cent said they planned to become foremen.

RELATION OF MAJOR SUBJECTS TO MAIN VOCATIONAL INTEREST

The seniors who had majors in the social studies said their main professional or vocational interests were as follows:

Per Cent	Main Professional or Vocational Interest
41.3	Enter the professions
11.4	Clerical work
11.3	Manufacturing
9.8	Enter semi-professional occupations
8.1	Become trade apprentices
5.6	Service occupations
4.6	Managerial positions
2.8	Miscellaneous
2.3	Agriculture
1.9	Sales occupations
1.0	Become foremen

(Note: Since each senior had more than one major subject, an extrapolation of the percentages would be based on a percentage of the *majors* rather than on a percentage of the individuals.)

Of the seniors who had a major in mathematics, 64.8 percent planned to enter the professions or semi-professional occupations.

Of the seniors who planned to become trade apprentices, 17.9 per cent of their majors were in the social studies; 10.2 per cent of their majors were in mathematics; and 9.9 per cent of their majors were in business education.

Of the seniors who planned to become foremen, 17.9 per cent of their majors were in the social studies; 10.2 per cent were in mathematics; and 11.5 per cent were in business education.

Of the seniors who had a major in printing, 42.2 per cent planned to go into manufacturing (which included skilled labor) and 19.7 per cent planned to become trade apprentices.

CERTAINTY OF CAREER PLANS VS MAIN VOCATIONAL INTEREST

When asked whether their present plans for their careers were definite, almost definite, or indefinite, about 26 per cent of the seniors said their career plans were definite, 40 per cent said they were almost definite, and 26 per cent said their plans were indefinite.

The seniors planning to enter the professions were the most definite about their plans and those planning to enter the sales occupations were the most indefinite.

The certainty of their career plans in relation to their main professional or vocational interests is shown for some of the seniors by the following table.

Main Professional or Vocational Interest	Per Cent of Seniors in This Group Whose Plans were Indefinite
Professional occupations	20.3
Managerial occupations	35.8
Manufacturing	38.9
Foremen	42.9
Apprenticeship	44.0
Sales occupations	47.2

WHEN CAREER DECISIONS WERE MADE

When asked what grade they were in when they decided upon their careers, most of the seniors said they were in the 12th grade. The table below shows the percentages by grades in which the seniors made their career choices. (More than a fourth of the seniors did not respond to this question.)

Per Cent of Seniors	Grade level at which Career Choice Was Made
38.3	Grade 12
16.5	Grade 11
9.1	Grade 10
5.6	Grade 9
1.8	Grade 8
0.8	Grade 7

(Fractional percentages of the seniors said their career choice was made while they were in the lower elementary school grades.)

IMPLICATIONS FOR GUIDANCE AND COUNSELING

About a fourth of all the seniors had no plans or indefinite plans for any further education or training beyond the high school. Of the seniors planning to become craftsmen, 39.4 per cent had no plans or had indefinite plans for further training in their chosen career; 35.6 per cent of those planning to become foremen had no plans or indefinite plans; and 36.5 per cent of those whose main vocational interest was in agriculture had no plans or indefinite plans for training in this vocation.

Of the seniors whose main interest was in becoming craftsmen, 24.4 per cent said they planned to go to a college or university; 8.7 per cent said they would go to a college extension center or regional campus; 11.7 per cent said they would enroll in a technical school; and 8 per cent said they would become trade apprentices.

The apparent low correlation of educational or training plans vs career choices seems to indicate a need for additional vocational and educational guidance. It appears that the non-college-bound

seniors have not had the benefit of vocational counseling. However, in view of the limited resources for vocational technical education facilities and/or programs, counselors are at a loss as to where to advise students to go for vocational training.

Only 2.3 per cent of the seniors indicated that the high school guidance counselor was the one who influenced them the most in choosing a career. The number of counselors available to make their influence felt among so many students may be a contributing factor. The North Central Association of Colleges and Secondary Schools recommends one guidance worker for each 500 students or fraction of that number. Many high schools presently do not provide this degree of service to students.

Effective vocational counseling requires an adequate staff of counselors who are knowledgeable in the industrial and business life of the community. Their services could well be augmented by advisory committees defined and required by Indiana statutes.

THE NEED FOR VOCATIONAL TECHNICAL TRAINING FACILITIES

If the percentage of seniors who planned to attend college full-time (42.8 per cent) is added to the 8.8 per cent who expected to attend a college extension center, the total percentage of seniors who might be said to be "college bound" is 51.6 per cent. This leaves 48.4 per cent of the seniors who did not plan to go to college either full-time or part-time. If 30,000 graduates enter college on a full-time basis as they indicated, then 40,000 graduates entered the labor force on a full-time or part-time basis.

Of this 40,000, about 12,000 (17.3 per cent of all the seniors) said they planned to enter a technical school or become trade apprentices. These graduates are seeking technical training facilities or trade-related training.

The interest shown by the seniors in vocational technical curricula covers a wide variety of occupational training. A comprehensive high school cannot offer such a variety of vocational training. Frequently graduates interested in enrolling in a technical school have difficulty in finding such a school meeting their need for type of education, location, and cost of education. The Indiana Vocational Technical College is designed to meet these needs.

Vocational and technical education programs are needed also to retrain employees who have requirements for different skills as a result of rapid and accelerating technological changes.

Many of the drop-outs will need basic education as a pre-requisite to their training in practical occupational skills.

At present the manpower shortage is so acute that if all members of the labor force were adequately trained for the job opportunities there would still be a shortage of manpower in Indiana. When this condition changes, the jobs will go to those most adequately trained and the need for retraining will again be emphasized.

There is a need to assist the unemployed in the identification, development and application of skills to aid them in occupational placement and advancement.

Considering the graduates who are not college-bound, the number of high school drop-outs, the need for retraining for technological changes and upgrading, it may be safe to assume that vocational technical training is needed for more than 100,000 annually in Indiana.

Studies made by the Indiana State Department of Public Health and the Indiana Department of Commerce predict that the total population of Indiana in 1985 will show a 30 per cent increase over the state's population of 1960.

During the same period of time, the population of Indiana in the age group of 18 to 24 years will increase by 100 per cent, the studies show.

These figures point toward great intensification of the problem of providing adequate vocational technical education at the post high school level.

CONCLUSIONS

On the basis of the seniors' responses to the survey, about three-fourths of them recognize the need for additional educational or vocational training beyond high school and had planned accordingly.

The influence of the conflict in Vietnam is shown by the fact that 8.2 per cent of the seniors planned to enter the military service upon graduation from high school. This means that about 5,740 boys were expecting to enlist or be called for service following graduation.

There appears to be a lack of knowledge on the part of the seniors in regard to vocational-training opportunities, and the type of training required for success in certain types of occupations.

There is a definite need for additional vocational technical training throughout the state. To the 40,000 seniors who planned to enter the labor force on a full-time or part-time basis must be added some 25,000 drop-outs who need more education for occupational placement more satisfying to their individual needs and the needs of society.

About 8,330 seniors said they planned to enroll in a technical school to take such courses as drafting, electronics, medical technology, secretarial training, etc. If the Indiana Vocational Technical College is to discharge its obligations as defined by the Indiana General Assembly, it must provide training opportunities for all these persons, and retraining for thousands of others who need to acquire new skills because of the rapidly changing technology.

Conducting a survey of this type each year can be of great value for the planning and development of educational resources. Within each high school, possibly at an earlier grade level, studies of this type should be conducted annually.

The high percentage of returns of the questionnaire, 54 per cent, is attributed to the efforts and cooperation of the State Department of Public Instruction and the high school administrators throughout the state who made this study of the results possible.

APPENDIX

LIST A

ORGANIZED OCCUPATIONAL CURRICULUMS

U. S. OFFICE OF EDUCATION

Industrial Fields

01 Aeronautical Design & Maintenance
02 Air Conditioning, Heating & Refrigeration
03 Automobile Maintenance
04 Automotive Technology
05 Building Construction
06 Building Maintenance
07 Chemical Technology
08 Civil Engineering Technology (Including Surveying)
09 Diesel Technology
10 Drafting & Machine Design
11 Electrical Construction & Wiring
12 Electrical Technology
13 Electronics
14 General Engineering Technology
15 Industrial Technology
16 Machine Repair
17 Marine Technology
18 Mechanical Technology
19 Petroleum Technology
20 Photography
21 Plumbing & Pipefitting
22 Radio & Television
23 Structural Technology
24 Technical Sales
25 Tool & Die Design
26 Welding
27 Other

Non-Industrial Fields

50 Accounting & Bookkeeping
51 Agriculture - Business
52 Agriculture
53 Animal & Poultry Husbandry
54 Appliance Repair
55 Business
56 Cabinet Making
57 Clothing & Textiles
58 Commercial Art & Advertising
59 Computer Operations
60 Cooking & Baking
61 Cosmetology & Barbering
62 Dairy Technology
63 Dental Hygiene
64 Dental Lab Technology
65 Executive Assistant Technology
66 Fashion Design
67 Fire Protection Technology
68 Floriculture & Horticulture
69 Food Administration
70 Furniture Making
71 Graphic Arts
72 Home Economics
73 Hotel Management
74 Insurance & Real Estate
75 Interior Decorating
76 Journalism
77 Key-Punch
78 Landscaping
79 Medical & Biological Lab Technology
80 Medical Assistant Technology
81 Nursing & Nurse Aide
82 Office Machine Operations
83 Photography
84 Police Technology
85 Publishing & Printing Technology
86 Sales & Distribution
87 Secretarial or Typing
88 Technical or Legal Secretarial
89 Transportation & Traffic Management
90 Upholstery
91 Other

LIST B

MAJOR OCCUPATIONAL GROUPS AND DIVISIONS

The following occupational titles are taken from the Dictionary of Occupational Classifications published by the United States Department of Labor. A few selected occupational classifications have been added for this study. Please review the entire list before you indicate the vocation that most accurately identifies your response to the question.

PROFESSIONAL AND MANAGERIAL OCCUPATIONS

PROFESSIONAL OCCUPATIONS

00001 Accountants and auditors
00002 Actors and actresses
00003 Architects
00004 Artists, sculptors, and teachers of art
00005 Authors, editors, and reporters
00006 Chemists
00007 Clergymen
00008 College presidents, professors, and instructors
00011 County agents and farm demonstrators
00012 Dentists
00013 Engineers, metallurgical, and metallurgists
00014 Engineers, chemical
00015 Engineers, civil
00016 Engineers, electrical
00017 Engineers, industrial
00018 Engineers, mechanical
00019 Engineers, mining
00020 Lawyers and judges
00022 Librarians
00023 Musicians and teachers of music
00024 Pharmacists
00025 Physicians and surgeons
00026 Social and welfare workers
00027 Teachers, primary school and kindergarten
00030 Teachers (secondary school) and principals
00031 Teachers and instructors
00032 Trained nurses
00033 Veterinarians
00034 Natural scientists
00035 Social scientists
00038 Other Professional occupations

PROFESSIONAL OR SEMIPROFESSIONAL OCCUPATIONS

00041 Aviators
00043 Decorators and window dressers
00044 Commercial artists
00045 Dancers and chorus girls
00046 Designers
00048 Draftsmen
00050 Laboratory technicians and assistants
00052 Healers and medical service occupations
00056 Photographers
00057 Athletes, sports instructors, and sports officials
00061 Radio operators
00062 Showmen
00064 Surveyors
00065 Embalmers and undertakers
00066 Technicians, except laboratory
10001 Cytological technologist
10002 Dental assistant
10003 Dental hygienist
10004 Dental laboratory technician
10005 Dietician
10006 Electroencephalography technician
10007 Food technologist
10008 Health scientist
10009 Industrial hygienist
10010 Inhalation therapist
10011 Medical artist
10012 Medical laboratory assistant
10013 Medical librarian
10014 Medical photographer
10015 Medical record librarian
10016 Medical record technician
10017 Medical secretary
10018 Medical social worker
10019 Medical technologist
10020 Occupational therapist
10021 Physical therapist
10022 Public health sanitarian
10023 Public health statistician
10024 Recreational therapist
10025 Rehabilitation counselor
10026 Sanitary engineer
10027 Science writer
10028 Speech and hearing clinician
10029 X-ray technologist

MANAGERIAL AND OFFICIAL OCCUPATIONS

00071 Hotel and restaurant managers
00072 Retail managers
00073 Wholesale managers
00074 Buyers and department heads, stores
00075 Floormen and floor managers, stores
00079 Inspectors, managerial and official
00081 Advertising agents
00083 Officials of lodges, societies, unions, etc.
00085 Credit men
00087 Managers and superintendents, buildings
00088 Ship captains, mates, pilots, and engineers
00091 Purchasing agents and buyers
00092 Conductors, railroad
00094 Public officials
00095 Inspectors, public service
00098 Other managers or officials

CLERICAL AND SALES OCCUPATIONS

CLERICAL AND KINDRED OCCUPATIONS

00101 Bookkeepers and cashiers, except bank cashiers
00102 Bookkeeping machine operators
00103 Checkers
00104 Clerks, general
00105 Clerks, general office
00106 Financial institution clerks
00107 Hotel clerks
00108 Insurance clerks
00110 Printing and publishing clerks
00111 Transportation clerks
00112 Clerks in trade
00115 Collectors, bills and accounts
00116 Correspondence clerks
00117 File clerks
00118 General industry clerks
00120 Library assistants and attendants
00123 Messengers, errand boys, and office boys and girls
00124 Telegraph messengers
00125 Office machine operators
00126 Paymasters, pay-roll clerks, and timekeepers
00127 Post office clerks
00128 Mail carriers
00131 Express messengers and railway mail clerks
00132 Physicians' and dentists' assistants and attendants
00133 Secretaries
00134 Shipping and receiving clerks
00135 Technical clerks
00136 Statistical clerks and compilers
00137 Stenographers and typists
00138 Stock clerks
00141 Telegraph operators
00142 Telephone operators
00143 Baggagemen, transportation
00144 Ticket, station, and express agents, transportation
00145 Weighers
00148 Agents and appraisers
00149 Other clerks and kindred occupations

SALES AND KINDRED OCCUPATIONS

00151 Auctioneers
00152 Salesmen, brokerage and commission firms
00155 Canvassers and solicitors
00156 Demonstrators
00157 Salesmen, insurance
00158 Newsboys
00161 Hucksters and peddlers
00163 Salesmen, real estate
00165 Salesmen, stock and bond
00170 Sales clerks
00175 Salespersons
00180 Salesmen, to consumers
00186 Salesmen and sales agents, except to consumers
00196 Sales clerks, dry cleaning and laundry
00197 Shoppers

SERVICE OCCUPATIONS

DOMESTIC SERVICE OCCUPATIONS

00201 Day workers
00202 Laundresses, private family
00203 Housekeepers, private family
00204 Housemen and yardmen
00205 Cooks, domestic
00206 Maids, general
00207 Nursemaids
00208 Parlormaids
00209 Miscellaneous servants, private family

PERSONAL SERVICE OCCUPATIONS

00221 Bartenders
00222 Bellmen and related occupations
00223 Boarding-house and lodging-house keepers
00224 Maids and housemen, hotels, restaurants, etc.
00225 Housekeepers, stewards, and hostesses
00226 Cooks, except private family
00227 Waiters and waitresses, except private family
00228 Ship stewards
00229 Kitchen workers in hotels, restaurants, railroads, steamships, etc.
00232 Barbers, beauticians, and manicurists
00234 Bootblacks
00236 Guides, except hunting and trapping
00238 Midwives and practical nurses
00240 Attendants, recreation and amusement
00242 Attendants, hospitals and other institutions
00243 Attendants, professional and personal service
00244 Camp attendants
00245 Doormen
00247 Apprentices to service occupations
00248 Ushers
00249 Airline hostesses

PROTECTIVE SERVICE OCCUPATIONS

00261 Guards and watchmen, except crossing watchmen
00262 Crossing watchmen and bridge tenders
00263 Firemen, fire department
00265 Policemen and detectives, except in public service
00266 Policemen and detectives, public service
00267 Sheriffs and bailiffs
00268 Soldiers, sailors, marines, and coast guards

BUILDING SERVICE WORKERS AND PORTERS

00282 Charwomen and cleaners
00284 Janitors and sextons
00286 Porters
00291 Pullman porters
00292 Baggage porters
00295 Elevator operators

AGRICULTURAL, FISHERY, FORESTRY, AND KINDRED OCCUPATIONS

AGRICULTURAL, HORTICULTURAL, AND KINDRED OCCUPATIONS

00301 Cash grain farmers
00302 Cotton farmers
00303 Crop specialty farmers

00304 Dairy farmers
00305 Fruit farmers
00306 General farmers
00307 Animal and livestock farmers
00308 Poultry farmers
00309 Truck farmers
00311 Farm hands, grain
00312 Farm hands, cotton
00313 Farm hands, crop specialty
00314 Farm hands, dairy
00315 Farm hands, fruit
00316 Farm hands, general farms
00317 Farm hands, animal and livestock
00318 Farm hands, poultry
00319 Farm hands, vegetable
00330 Fruit and vegetable graders and packers
00331 Blight control laborers and bindweed eradicators
00332 Irrigation occupations
00335 Farm mechanics
00336 Farm couples
00337 Farm managers and foremen
00338 Nursery operators and flower growers
00339 Nursery and landscaping laborers
00340 Gardeners and grounds keepers, parks, cemeteries, etc.
00341 Hatchery men
00342 Laborers, hatchery
00343 Stablemen
00344 Barn bosses
00347 Cotton ginners
00348 Technical agricultural occupations
00349 Agricultural occupations

FISHERY OCCUPATIONS

00387 Fishermen and oystermen
00388 Sponge and seaweed gatherers
00389 Fishing occupations

FORESTRY, HUNTING AND TRAPPING OCCUPATIONS

00391 Forestry occupations, except logging
00396 Hunting and trapping guides
00397 Hunters and trappers

SKILLED, SEMISKILLED, AND UNSKILLED OCCUPATIONS

Occupations in Manufacturing and Related Activities

OCCUPATIONS IN PRODUCTION OF FOOD PRODUCTS

00401 Bakers
46802 Occupations in production of bakery products
46803 Occupations in production of beverages
46804 Occupations in canning and preserving of foods
46805 Occupations in production of confections
46806 Occupations in processing of dairy products
04607 Millers, grain, flour, feed, etc.
46808 Occupations in production of grain-mill products
46809 Occupations in slaughtering and in preparation of meat products
46810 Occupations in production of miscellaneous food products

OCCUPATIONS IN MANUFACTURE OF TOBACCO PRODUCTS

46812 Occupations in manufacture of tobacco products

OCCUPATIONS IN PRODUCTION OF TEXTILES

46814 Occupations in manufacture of knit goods
00415 Weavers, textile
00416 Loom fixers
04618 Nonprocess occupations, in manufacture of textiles
46819 Occupations in manufacture of textiles

OCCUPATIONS IN PRODUCTION OF FABRICATED TEXTILE PRODUCTS

46821 Furriers and occupations in fabrication of fur goods
00423 Milliners
46824 Occupations in manufacture of hats and caps
04625 Dressmakers and seamstresses
00426 Tailors and tailoresses
46827 Occupations in fabrication of textile products

OCCUPATIONS IN PRODUCTION OF LUMBER & LUMBER PRODUCTS

04629 Inspectors, scalers, and graders, logs and lumber
46830 Lumbermen, raftsmen, and woodchoppers
46831 Sawmill occupations
00432 Cabinetmakers
46833 General woodworking occupations
46834 Planing mill occupations
04635 Upholsterers
46836 Occupations in manufacture of furniture
46838 Cooperage occupations
46839 Occupations in manufacture of miscellaneous finished lumber products

OCCUPATIONS IN PRODUCTION OF PAPER AND PAPER GOODS

46841 Occupations in manufacture of paper and pulp
46842 Occupations in manufacture of paper goods

PRINTING OCCUPATIONS

04644 Compositors and typesetters
00445 Electrotypers and stereotypers
00446 Lithographers
00447 Photoengravers
00448 Pressmen and plate printers, printing
46849 Occupations in printing and publishing

OCCUPATIONS IN PRODUCTION OF CHEMICALS AND CHEMICAL PRODUCTS

46850 Occupations in production of paint and varnish
46851 Occupations in production of plastics and related synthetic materials, and in the processing of chemicals
46852 Occupations in production of industrial chemicals
46853 Occupations in production of chemical products
46854 Occupations in production of ammunition

OCCUPATIONS IN PRODUCTION OF PETROLEUM & COAL PRODUCTS

46855 Occupations in refining of petroleum
46856 Occupations in production of miscellaneous petroleum and coal products

OCCUPATIONS IN PRODUCTION OF RUBBER GOODS

46857 Occupations in production of rubber goods

OCCUPATIONS IN MANUFACTURE OF LEATHER & LEATHER PRODUCTS

46859 Occupations in manufacture of leather
04660 Shoemakers and shoe repairmen, not in factory
46861 Occupations in manufacture of boots and shoes
46862 Occupations in manufacture of leather products, other than boots and shoes

OCCUPATIONS IN PRODUCTION OF STONE, CLAY, AND GLASS PRODUCTS

46865 Occupations in production of glass and glass products
46866 Occupations in production of clay products
46867 Occupations in production of cement, concrete, gypsum, and plaster products
00468 Stonecutters
46869 Occupations in stoneworking
46870 Occupations in production of asbestos products, abrasives, and polishing products

METALWORKING OCCUPATIONS

00471 Jewelers, watchmakers, goldsmiths, and silversmiths
46872 Occupations in manufacture of clocks, watches, jewelry, and articles of precious metals
04673 Engravers

46874	Occupations in electroplating, galvanizing, and related processes
00475	Machinists
00476	Toolmakers and die sinkers and setters
46877	Filers, grinders, buffers, and polishers (metal)
46878	Machine shop and related occupations
00480	Tinsmiths, coppersmiths, and sheet metal workers
04681	Molders
46882	Foundry occupations
04683	Boilermakers
46884	Structural-metal and ornamental-metal workers
04685	Welders and flame cutters
04686	Blacksmiths, forgemen, and hammermen
46887	Heat treaters, annealers, and temperers
46888	Occupations in mechanical treatment of metals (rolling, stamping, forging, pressing, etc.)
04690	Ore dressing occupations
04691	Furnacemen, smelters, and pourers
46892	Occupations in production of ferrous and nonferrous metals
46893	Occupations in fabrication of metal products
46895	Inter-industry metalworking occupations

ELECTRICIANS & OCCUPATIONS IN MANUFACTURE OF ELECTRICAL EQUIPMENT

04697	Electricians
46898	Occupations in manufacture of radios, phonographs, and accessories
46899	Occupations in manufacture of electrical machinery and accessories
57900	Occupations in manufacture of miscellaneous electrical equipment

OCCUPATIONS IN MANUFACTURE OF TRANSPORTATION EQUIPMENT

57902	Occupations in manufacture of automobiles
57903	Occupations in building of aircraft
57905	Occupations in building of transportation equipment (except automobiles and aircraft)

OCCUPATIONS IN MANUFACTURE OF MISCELLANEOUS PRODUCTS

05708	Opticians and lens grinders and polishers
57909	Occupations in manufacture of professional and scientific apparatus
57910	Occupations in manufacture of fabricated plastics products
00512	Piano and organ tuners
57913	Occupations in the manufacture of miscellaneous products

MISCELLANEOUS MANUFACTURING OCCUPATIONS

57916	Painters, except construction and maintenance
05717	Pattern and model makers, except paper
05718	Dyers
00919	Miscellaneous assembly occupations

OCCUPATIONS IN NONMANUFACTURING ACTIVITIES
OCCUPATIONS IN EXTRACTION OF MINERALS

57920	Occupations in production of petroleum
05721	Miners and mining-machine operators
57922	Occupations in extraction of minerals

CONSTRUCTION OCCUPATIONS

05723	Construction machinery operators
05724	Brick and stone masons and tile setters
00525	Carpenters
05726	Cement and concrete finishers
05727	Painters, construction and maintenance
00528	Paperhangers
00529	Plasterers
00530	Plumbers, gas fitters, and steam fitters
00731	Roofers and slaters
57932	Other construction occupations
05733	Asbestos and insulation workers

TRANSPORTATION OCCUPATIONS

07935	Boatsman
05736	Chauffeurs and drivers, bus, taxi, truck, and tractor
05737	Teamsters
05738	Brakemen, railroad
00539	Conductors, bus and street railway
05740	Motormen (vehicle), except railroad, railway, and bus
00541	Locomotive engineers
00542	Locomotive firemen
00543	Motormen, street, subway, and elevated railway
05744	Switchmen, railroad
00745	Gatemen and train callers
07947	Longshoremen and stevedores
57948	Sailors and deckhands, except U. S. Navy
57949	Other transportation occupations

COMMUNICATION AND UTILITY OCCUPATIONS

05751	Power station operators
05753	Linemen and servicemen, telegraph, telephone, and power
57954	Occupations in furnishing utilities

TRADE AND SERVICE OCCUPATIONS

05755	Motion picture projectionists
57956	Amusement, recreation, and motion picture occupations
57957	Occupations in laundering, cleaning, dyeing, and pressing of apparel and other articles
05758	Meatcutters, except in slaughtering and packing houses
57959	Occupations in trades and services
00760	Attendants, filling stations and parking lots
57961	Public service occupations

MISCELLANEOUS OCCUPATIONS

00763	Nonprocess occupations in manufacturing
07968	Packing, filling, labeling, marketing, bottling, washing, and related occupations
07970	Firemen, other than process firemen
07971	Oilers of machinery
57972	Engineers, stationary
57973	Cranemen, derrickmen, hoistmen, and shovelmen
05774	Blasters and powdermen
05775	Drillers, extraction of minerals and construction
05776	Inspectors
57977	Glaziers
00578	Millwrights
05779	Mechanics and repairmen, railroad and carshop
05780	Mechanics and repairmen, airplane
05781	Mechanics and repairmen, motor vehicle
57983	Mechanics and repairmen
05784	Tool sharpeners and dressers
07985	Transportation equipment laborers, washers, and greasers
57986	Photographic process occupations
07987	Chainmen, rodmen, and axmen, surveying
57988	Warehousing, storekeeping, handling, loading, unloading, and related occupations
57989	Key punch operators

FOREMEN

00591	Foremen, manufacturing
00593	Foremen, extraction of minerals
00594	Foremen, construction
00595	Foremen, transportation, communication, and utilities
00597	Foremen, services, amusements
00599	Foremen, other

APPRENTICES

00793	Carpenters' apprentices
00794	Machinists' apprentices
00795	Electricians' apprentices
00796	Plumbers' apprentices
00797	Apprentices to other construction and hand trades
00798	Apprentices to printing trades
00799	Apprentices to other trades

NOTES AND MEMOS

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